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ABSTRACT

This is a report on the Intergovernmental Conference on Environmental Education held from October 14-26 in the USSR. The conference intended to create the necessary framework for broad programs of international cooperation, to reach agreement on goals, objectives, and guiding principles for environmental education, and to devise practical recommendations for action in environmental education. The conference adopted a 60-page final report that contained 41 recommendations. Among them was an international framework for environmental education consisting of a goal statement, objectives, and guiding principles. These goals, objectives, and principles are presented in this report along with some suggestions for implementation in the United States. (BB)

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TOWARD AN ACTION PLAN: Report on the Intergovernmental Conference on Environmental Education

If ever a group could echo the words of Henry V, "we few, we happy few, we band of brothers," it is the members of the Conservation Education Association, who have labored for a quarter of a century to initiate, stimulate, improve, and maintain conservation, outdoor, resource-use, and environmental education efforts in schools and nonformal education institutions. Long before the histrionics of Earth Day Teach-Ins, CEA members had designed and implemented holistic conservation education programs. With pride, CEA could point to some significant achievements in the form of successful and continuing conservation education endeavors. With even greater pride, CEA can now take satisfaction from its role, and that of its members, in shaping some of the events and forces that have opened new opportunities for giving environmental education higher priority among concerns in education. Among those accomplishments was the lead role CEA assumed in creating the Alliance for Environmental Education and the continuing support CEA gives the Alliance and its activities.

Last year, your CEA annual meeting program theme gave emphasis to the need for an international perspective in environmental conservation education. That was a logical follow-up to the North American Regional Seminar on Environmental Education held in October 1976 in St. Louis under the auspices of the Alliance as part of preparations for the Intergovernmental Conference on Environmental Education that was to be held in October 1977.

Remarks by Walter E. Jeske, Chief, Education and Publications Branch, Soil Conservation Service, Washington, D. C.; at 25th annual meeting of the Conservation Education Association, Logan, Utah, August 16, 1978.

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As one of the United States delegates to the Intergovernmental Conference, my primary purpose today is to report to you on what the governments of the nations of the world decided at that meeting. In addition, I will report a few of the efforts being initiated in the United States to follow-up on the Intergovernmental Conference, ask for the help of CEA in doing some of that follow up work, and share with you some of my perceptions about the agenda for the future of environmental education in our country.

The boundaries often drawn between foreign and domestic matters is increasingly artificial. Many of the major problems humankind faces (inflation, unemployment, environmental degradation, food supply, resource depletion) are common to many nations and can be resolved or alleviated only through international cooperation--bilateral, regional, or worldwide. Global interdependence is a fact whether one considers economics or ecology. That was the basic rationale for conducting, from October 14 through 26, 1977, in the USSR, the conference with the unwieldy title: "Intergovernmental Conference on Environmental Education."

Organized by the United Nations Educational, Scientific and Cultural Organization (Unesco) in cooperation with the United Nations Environment Program (UNEP), this was the first intergovernmental conference to address the issue of environmental education directly and comprehensively.

It was not just another meeting of a few hundred experts and lay people concerned about environmental education. This was a ministerial level meeting that is second only in importance to a Unesco General Conference. Ministerial level means that the chief officers for education

and for environment of the nations of the world were heads of official country delegations.

In keeping with the level of responsibility of the conference, it was conducted according to formal rules of procedure and in all five working languages of Unesco: Arabic, English, French, Russian, and Spanish. All presentations and formal discussions were translated simultaneously into those working languages. Each formal action of the conference was the product of official votes of delegates from Member States. As such, they constituted formal international actions to be reported back to the individual member governments for appropriate action.

Official delegations from national governments of 66 nations participated in the conference in the city of Tbilisi, capital of the Soviet Socialist Republic of Georgia. Situated in the foothills of the Great Caucasus in southern Russia, about equidistant between the Black and Caspian Seas, Tbilisi is home for nearly 1 1/4 million people. In addition to the official conference delegates, there were observers and representatives from 8 organizations and programs of the United Nations system, 3 other intergovernmental organizations, and 20 international nongovernmental organizations.

The Tbilisi conference was the culmination of the initial 3-year phase of the Unesco/UNEP International Program for Environmental Education that grew out of the United Nations Conference on the Human Environment, held in Stockholm in 1972. In October 1975, environmental education experts from 65 countries met in Belgrade, Yugoslavia, to critique and

revise 14 papers prepared earlier as working documents on various aspects of environmental education throughout the world. As part of their effort, those experts formulated recommendations and guidelines for a comprehensive, cooperative international program of action in behalf of global environmental education.

The materials generated by the Belgrade workshop were the basic working documents for a series of six regional seminars on environmental education held in 1976 in Brazzaville, the People's Republic of the Congo; Bangkok, Thailand; Kuwait; Bogota, Columbia; Helsinki, Finland; and St. Louis, Missouri.

After the regional seminars, most countries established national planning committees to consider the recommendations of the regional meetings and to prepare their nation's positions and materials for the conference. For example, in the United States, a national task force of 75 members was set up under the aegis of the Federal Interagency Committee on Education. The task force included individuals from federal and state governments, industry, academia, and nongovernmental organizations. That group invested substantial effort in reviewing current environmental education materials and programs and in combing for United States position statements the proceedings and papers emanating from national conferences, including:

1. The National Conference on Environmental Education, held in December 1970 in Green Bay, Wisconsin
2. The National Conference on Environmental Studies Programs in Higher Education, held in December 1972 in Green Bay, Wisconsin
3. The National Working Conference on Emerging Issues in Environmental Education, held in June 1974 in Ann Arbor, Michigan

4. The Environmental Education Perspectives and Prospectives Conference, held in July 1975 in Snowmass, Colorado

5. The American Regional Seminar on Environmental Education, held in October 1976 in St. Louis

As a result of systematic preparatory efforts, such as that in the United States, most of the country delegations went to Tbilisi very well prepared to work on the conference's five major agenda items:

1. Major environmental problems in contemporary society

2. The role of education in facing the challenges of environmental problems

3. Current efforts at the national and international levels for the development of environmental education

4. Strategies for the development of environmental education at the national level

5. International and regional cooperation for the development of environmental education.

Nine working documents for the conference were prepared by Unesco and UNEP secretariats. All were highly useful to conference participants. One of special value, and which is available from Unesco publications sales offices, was entitled "Trends in Environmental Education." It contains the edited and revised papers originally prepared for the 1975 Belgrade conference.

At the Tbilisi conference, delegates kept their attention focused directly on the substantive issues of the agenda. There appeared to be genuine unanimity of purpose in finding workable strategies for advancing environmental education. Unlike other recent intergovernmental conferences, there was little cant and political rhetoric. I believe the conference

succeeded (a) in creating the necessary framework for broad programs of international cooperation, (b) in agreeing on goals, objectives, and guiding principles for environmental education, and (c) in devising practical recommendations for action in environmental education by Member States. In the United States and in other countries, the conference in Tbilisi is fulfilling its promise and is stimulating action in behalf of environmental education.

An international environmental education conference cannot accomplish very much environmental education in and of itself. Its role is to define problems, to suggest approaches to resolving those problems, and most especially, to focus the attention of governments on environmental education as one effective tool in human efforts to wisely develop the earth's resources and enhance the quality of life while safeguarding the ecosystems upon which all life ultimately depends.

To give you a sense of the flavor and physical setting of the conference, the City of Tbilisi is about 1800 kilometers south of Moscow, near the border with Turkey. On a clear day, one could see Mt. Ararat. Geographically, the city is closer to Rome than to Moscow. Human habitation of this part of Asia Minor can be traced to antiquity. Before the birth of Christ, the Romans occupied this land. Georgia once included a much larger land area than it does today. The language spoken now is Georgian, not Russian.

The country was named Georgia--meaning "the land of the Christians"--early in the third century A.D. After a series of devastating wars in the

late 18th and early 19th centuries, Georgia joined Czarist Russia for military protection at about the time the United States made the Louisiana Purchase. It was not until 1922, 5 years after the October 1917 Socialist revolution in Russia that Georgia became an integral part of the Soviet Union. During World War II, Georgians were not all that supportive of Mother Russia. That brought about the bloody purges by Stalin, a native Georgian, after the war.

Tbilisi does not have an international airport. The United States delegation to the conference had to enter the Soviet Union through Moscow. Though delegates were traveling on official or diplomatic passports, that did not reduce the interminable waiting in lines for each little detail that is part of the process of entering Russia. It was soon clear that American officials are not among the favored in the USSR.

(slides)

1. Blank slide
2. After a lengthy wait at the international airport in Moscow, we were taken to the Hotel Roussia for an overnight stay.
3. Dr. Mary Frances Berry, Assistant Secretary for Education, U. S. Department of Health, Education and Welfare, and head of the U. S. delegation, was first in line to register at the hotel. It took her only an hour and a half to get a room.
4. The pleasingly designed red telephones in each hotel room frequently worked.
5. At midnight, we walked the four blocks to Red Square. This is the famous St. Basil's Cathedral at one end of the square.
6. The USSR National Historical Museum and Archives at the other end of Red Square.
7. Lenin's tomb in the wall of the Kremlin at midnight

8. Lenin's tomb the next day. Note the lines of Russian people waiting to enter.

9. Red Square from near the Historical Museum and Archives

10. St. Basil's Cathedral. On the left, note preparations for celebration of the 60th anniversary of the Socialist Revolution.

11. One view from the window of my room at Hotel Roussia.

12. Looking in another direction from my hotel room--two more churches.

13. Across the Moscow River from the Hotel Roussia was the main building of Moscow University.

14. At the end of our 3-hour, 1800 kilometer Aeroflot flight from Moscow to Tbilisi, we saw this map of the city in the Tbilisi airport.

15. Though the conference was in session 6 days a week and several evenings, most conferees found a few minutes during lunch breaks and at other odd times to see a bit of Tbilisi. Lenin Circle was the center of the city. At all times, there were numerous cars on the streets.

16. Lenin statue at close range.

17. Buildings on the banks of the Kura River in Tbilisi.

18. Rustevali Avenue from my room on the 14th floor of Hotel Adjari.

19. The view in the opposite direction from my hotel room. These single family dwellings have lovely backyards.

20. Another view from my hotel room. Clothing hung out to dry was a common sight.

21. He went that-a-way! -- a directional sign for a trail in a park and nature area.

22. Entrance to the park showing the relative size of the pointing hand.

23. Nature trail in the park. Erosion on well-used trails is not unknown to Georgians.

24. An inviting bench along the trail.

25. In a mini-park in the city, flat stones were used imaginatively in constructing a wall.

26. A state owned food store in Tbilisi.

27. A Georgian baker and his helpers.

28. Russia's answer to Addidas. But Georgians said they fell apart after the third wearing.

29. In the Georgian version of a farmers market, choice quality produce was available early in the day

30. Easy shopping--first the pig, then the apple to put in its mouth

31. No plastic wrapping on bread in stores in Georgia.

32. In the farmers market, food stuffs were of excellent quality but considerably more expensive than in state stores.

33. Some kinds of work are the same everywhere.

34. Workers repairing a gas line across the street from the Hotel Adjari. Note the pay telephone on the wall.

35. Throughout the day the streets of Tbilisi were crowded with people. After wondering aloud about whether anyone ever worked, some wag opined that they were all government workers.

36. School girls in Georgia enjoyed their lunch break much like youngsters in many countries.

37. A Georgia peach.

38. Beautiful entrance to the funicular--an aerial tram. One of the means of getting to the top of the hills overlooking Tbilisi.

39. We took...

40. the cable car...

41. to the top...

42. of the hills.

43. Near the top of the hills was this 6th century monastery now used as a church. The walls were covered with deteriorating ceramic art.

44. At the church, the conference observer from the Holy See in Rome (left) and the Metropolitan of the Tbilisi Eastern Orthodox Church chatted in front of Stalin's mother's tomb. Their common language was Latin.

45. From the top of the surrounding hills, one could see that Tbilisi was built on the narrow flood plain of the now highly polluted Kura River.

46. The conference was not in session on Sundays and Intourist wanted to keep delegates out of mischief. The first Sunday, we were taken by bus about 160 kilometers west of Tbilisi toward the Black Sea. The area we traversed had hundreds of very large grape vineyards.

47. The next Sunday, we were taken east of Tbilisi toward the Caspian Sea. On the way we stopped at Mefista, about 10 miles from Tbilisi, to inspect this ancient cathedral, originally built in the 5th century.

48. We also stopped at Gori, Stalin's birthplace, and visited an exceptionally large museum containing this life-size statue of Stalin.

49. Our destination was Bojomi, a popular Russian tourist resort.

50. We were told that at Bojomi most of the mineral water sold in the Soviet Union is bottled directly from natural springs.

51. At Bojomi we also visited a nature preserve. This map of Georgia shows the location of all the nature preserves in the Republic.

52. In Tbilisi, all conference sessions were held in the Supreme Soviet of the Georgian Soviet Socialist Republic--comparable to a state capitol in the United States. Can you imagine Colorado turning over its entire state capitol building for more than 2 weeks for a conference of people from more than 70 nations?

53. Statuary at the entrance to the Supreme Soviet.

54. Inner court of the Supreme Soviet.

55. The specially designed conference logo was displayed prominently--in English--throughout the city of Tbilisi.

56. Mr. Amadou-Mahtar M'Bow, Director-General of Unesco, presented the opening conference address. Elected by acclamation as president of the conference was Dr. Djermein M. Gvishiani, Vice Chairman of the all Russia State Committee for Science and Technology.

57. Dr. George Francis, professor of environmental studies at the University of Waterloo, in Canada, was elected conference Rapporteur-General.

58. The conference in night session.

59. High above the conference hall were the booths in which translators simultaneously translated speeches and discussion into the five working languages of Unesco.

60. Members of the Russian delegation listening intently to conference proceedings. Fourth from the right is Dr. I. D. Zverev, Secretary of the Department of Didatics and Methods at the Academy for the Science of Pedagogy, with whom I worked closely far into the night on several occasions as one of the six members of the committee selected to revise, coordinate, and rewrite some 85 original recommendations into 21 recommendations for conference consideration.

61. Dr. William B. Stapp (right), of the University of Michigan, confers with George Wolin of the United Kingdom.

62. United States delegate Dr. Robert Cook and his wife Ann. Bob is the deputy director of the Fish and Wildlife Service, U. S. Department of the Interior.

63. Madam Madhuri R. Shah, Vice Chancellor of the Women's University of Bombay, was named chairman of the one conference commission.

64. Quan Mateos was head of the Mexican delegation.

65. Among the representatives of 20 nongovernmental organizations was Jim Aldrich (center), formerly executive director of the Alliance for Environmental Education.

66. United States delegate Frederick Lawton (left), of the U. S. Department of State, and Dr. David Darland, of the National Education Association.

67. Other United States delegates included (left to right) Marshall Purnell, of the American Institute of Architects; Dr. Donald King, of the U. S. Department of State; and Carol Colloton, of the United States Commission for Unesco.

68. On the final day of the conference...

69. delegates approved the Declaration of Tbilisi, which embodies the principles of environmental education upon which they had agreed.

70. Blank.

The conference adopted a 60-page draft final report that the Unesco Secretariat edited and published in May 1978. That report was sent to all Member States of the United Nations and to individuals who participated

in the conference. Apparently, additional copies are not available from Unesco.

The final report contained 41 recommendations. Among them was an international framework for environmental education consisting of a goal statement, objectives, and guiding principles. The goals of environmental education were stated as:

1. To foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural communities
2. To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment
3. To create new patterns of behaviour of individuals, groups and society as a whole towards the environment.

Copies of the complete recommendation, including the objectives and and guiding principles for environmental education and the goals just mentioned, are available here today (and a copy is appended to my presentation). At the Alliance sponsored 1978 National Leadership Conference for Environmental Education held last March, one of the actions suggested was that of getting widespread agreement in the United States on these goals, objectives, and guiding principles. The Alliance would appreciate having a response from CEA as well as from individual members. You might also take a copy and encourage other organizations with which you as an individual are affiliated to consider endorsing or offering comments on the broad goals, objectives, and guiding principles.

The 41 recommendations adoped at Tbilisi represent numerous other areas

of agreement among nations, ranging from emphasis on environmental education as a lifelong process to the vital role that nongovernmental organizations (NGOs) must play if there ever is to be anything approaching universal environmental literacy.

The last two conference recommendations dealt directly with NGOs. One recommendation is that Member States should encourage and support NGOs at local and national levels. Another is that NGOs should incorporate environmental education activities in their programs. Thus, the Conservation Education Association and other NGOs have encouragement from the highest international levels to strengthen their environmental education efforts. CEA is in a unique position to do much to help extend and advance environmental education to the level described by Dr. Mary Berry, chief education officer of the United States, in her address to the Tbilisi conference when she noted:

> We are here to see that the world's new awareness of the importance of our relationship to the environment--a new environmental conscience--suffuses all education, all teacher training, all coursework in whatever subject--and, indeed, all the education activities of life.

It is important that we sustain the momentum for environmental education generated by the Tbilisi conference and preparations for it. Already underway in the United States are some continuing endeavors that are a direct follow-up to recommendations of the conference. Among those endeavors are:

1. Publication of the 34-page document "Toward an Action Plan: A Report on the Tbilisi Conference on Environmental Education." That report was produced by the Subcommittee on Environmental

Education of the Federal Interagency Committee on Education. I have brought along copies of the publication for you. In addition to a straightforward report on the meeting, it contains a digest of all conference recommendations and a discussion of some implications of those recommendations for education in the Unites States. As chairman of FICE Subcommittee on Environmental Education, I pledge to do all that I can to see that environmental education gets some attention among our national priorities.

Mary Berry stated in the preface to the report, "We must move toward a coherent national strategy for environmental education that takes full advantage of the strength of our diversity. We must make sure that all essential items are provided for, that unnecessary redundancies do not squander our resources, and that adequate coordination is maintained."

As I sense it, the time is right for taking some first steps to devise a workable, comprehensive, national action plan for environmental education. Putting together such a plan is going to require some compromises. Policy makers at all levels must hear a clear call to address accomplishable goals instead of a cacophony of conflicting voices. The investment of more energy in adversarial tactics than in cooperation and the bickering and divisiveness among factions that proclaim themselves the true high

priests are a deadly threat to environmental education in this country. To elicit support, any strategy or plan will have to provide for appropriate division of labor among the various elements of the private sector (such as professional groups, business and industry, labor, academia, nature centers and parks, museums, zoos, and the like) and the different levels and agencies of government.

2. Another important follow-up to the Tbilisi conference was the national "From Ought to Action: National Leadership Conference" conducted by the Alliance for Environmental Education in Washington, D. C., in late March 1978. That conference focused on positive, purposeful, and practical action for environmental education. Conferees crafted 16 specific recommendations, ranging from creation of a national environmental education center to action for state legislation for environmental education. Initial efforts to implement many of the recommendations are underway. The proceedings of the conference should be available early next month from the Educational Resources Information Center (ERIC) at the Ohio State University.

Though not direct descendents of the Tbilisi conference, I mention the following three environmental education activities as types of efforts by different agencies and organizations that are a necessary part of conference follow-up in the United States:

1. The FICE Subcommittee on Environmental Education, with major assistance from the ERIC Science, Mathmatics, and Environmental Education Center at the Ohio State University, published in June 1978 a 165-page book entitled "Environmental Education Activities of Federal Agencies". It contains descriptions of the environmental education objectives, activities, programs, accomplishments, and plans of some 40 Federal Governmental agencies. This volume is the first step in identifying gaps and overlaps in environmental education coverage at the Federal level.
2. As an example of one Federal Government agency's new efforts in behalf of environmental education, the Heritage Conservation and Recreation Service (formerly the Bureau of Outdoor Recreation) in the U.S. Department of the Interior has prepared and sent for review to many organizations and individuals a report and recommendations on inclusion of environmental education in the congressionally mandated National Outdoor Recreation Plan that the agency is to submit to the President and Congress this year.
3. As an example of work by a large national nongovernment organization, the National Association of Conservation Districts (NACD) has prepared and is reviewing at regional conferences a "Conservation District Guide for Education Programs". The Guide is designed as a step by step approach to planning and implementing successful environmental education programs for use by each of the 3000 conservation districts in the United States. Development of the Guide was stimulated by a series of regional workshops held last

year involving conservation district directors and educators.

The report on the Tbilisi conference prepared by the FICE Subcommittee on Environmental Education sketches a few broad implications of that conference for education in the United States. But there are numerous significant and practical actions that need to be taken now to influence the scope and extent of environmental education. Among the important opportunities that CEA, its members and others might well help address are these:

1. Environmental education should connect itself strongly to the coming growth areas in education. With the school age population on a down trend, workers needing almost constant retraining to survive in the modern labor market, increasing concern about relation of food to human health, a general commitment to life-long education, a larger proportion of women entering the labor market, and the continued growth in numbers of adults participating in organized learning activities, it is apparent that growth areas in education include vocational education, early childhood education, nutrition education, and adult education. Little has been done to infuse concepts of harmonizing human activities with ecosystem processes into those areas of education.
2. The long-sought teacher centers are to become a reality soon. The U.S. Office of Education anticipates that about 60 centers will be operational early in 1979. Designed to meet the practical and real inservice needs of teachers and giving teachers major

responsibility for the kinds of training and curriculum development programs that will best meet their needs, the centers could be especially important avenues for infusing environmental education throughout school curricula. One outcome of the conference conducted by the Alliance for Environmental Education last March is to be the preparation by the National Education Association and the American Federation of Teachers of a comprehensive rationale for environmental education to be distributed to teacher centers. That is only a start, much more should be done to offer appropriate help to each center.

3. Education is a function of the states in our nation. Thus, there is a special need for strong, nongovernment state-level organizations supportive of environmental education. Characteristics of an effective state-level alliance for environmental education include:
   (a) membership by nongovernment organizations only
   (b) rapid and efficient communication system
   (c) organizational members representing all sectors of society
   (d) strong and innovative leadership
   (e) capability for taking necessary political and other action for environmental education.
4. Many agencies of government have or should have a legitimate interest in good environmental education. Through cooperation they can accomplish vastly more than each could achieve alone.

In addition to an alliance of nongovernment organizations, it would be highly beneficial to create something like a mini-FICE in each state, an entity through which all government agencies could get their environmental education act together.

5. The entire field of environmental education needs a more effective communications system, an interactive, flexible network to which all who are even peripherally engaged in environmental education have access. In such a system, provision should be made for horizontal connections at every level as well as vertical communication about nearly any aspect of environmental education. Getting an efficient network into operation should be a high priority action item.

6. Government agencies will have to provide environmental education programs for their employees and managers if those agencies are to make effective contributions to improving environmental literacy. Agencies outside the sphere of education need to help their people learn educational process if they are going to deal with teachers. Just as important, education agencies have to give all their employees some basic understanding of environmental science and accurate information on environmental issues.

7. State departments of education must have strengthened capabilities for providing leadership and service in environmental education. At a minimum this means having a full time environmental education

coordinator or program leader in the department. The coordinator position needs to be so imbedded in the department's structure that the board of education does not cut it when they feel the pressure for tax reductions or want to change emphases to reading and counting in the name of basic skills. As a corollary, state boards of higher education also need to have strengthened capabilities to encourage environmental studies programs at colleges and universities.

The seven practical opportunities for action that I've mentioned are largely organizational in nature. Progress in accomplishing any of them would simply open doors for initiation, stimulation, improvement, and implementation of more and better solid environmental education efforts throughout the nation. I have not mentioned a whole array of substantive, perplexing, and continuing problems and issues in environmental education that need serious attention--problems and issues such as rigorous intellectual development of the philosophical and conceptual underpinnings of environmental education; the general tendency of environmental educators to present strongly the biased view that all human impact on natural systems is negative; the issue of quality of inservice teacher training for environmental education; the misuse of inquiry-discovery teaching techniques in environmental education; the continued lack of creative, hands-on learning opportunities in many programs labeled environmental education; the limited testing, use, and distribution of most environmental

education materials.

No good purpose is served by lengthening our list of ideas for action in behalf of environmental education or the brief enumeration of substantive issues and problems. Among all the major institutions of society, only education in its myriad forms can provide the leadership for rational, adaptive response by all citizens to the resource constrained economies that North Americans will face in the future. The test of environmental education is to be found not in philosophy and well-turned phrases but in positive performance. Performance judged on the degree to which it enables each citizen to cope intelligently with the ecological, economic, social personal, and political decisions required for the rational use and protection of our common environment. Delivering that level of performance is our job!

Goals, Objectives, and Guiding Principles for Environmental Education*

The goals of environmental education:

1. to foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas

2. to provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment

3. to create new patterns of behavior of individuals, groups and society as a whole towards the environment

The categories of environmental education objectives:

1. Awareness: to help social groups and individuals acquire an awareness of and sensitivity to the total environment and its allied problems

2. Knowledge: to help social groups and individuals gain a variety of experience in, and acquire a basic understanding of the environment and its associated problems

3. Attitudes: to help social groups and individuals acquire a set of values and feelings of concern for the environment, and the motivation for actively participating in environmental improvement and protection

4. Skills: to help social groups and individuals acquire the skills for identifying and solving environmental problems

5. Participation: to provide social groups and individuals with an opportunity to be actively involved at all levels in working toward resolution of environmental problems

Some guiding principles for environmental education:

Environmental education should:

1. consider the environment in its totality - natural and built, technological and social (economic, political, technological, cultural-historical, moral, aesthetic)

2. be a continuous lifelong process, beginning at the pre-school level and continuing through all formal and non-formal stages

3. be interdisciplinary in its approach, drawing on the specific content of each discipline in making possible a holistic and balanced perspective

*These were agreed upon by delegates from 66 nations attending the Intergovernmental Conference on Environmental Education in October 1977.

4. examine major environmental issues from local, national, regional and international points of view so that students receive insights into environmental conditions in other geographical areas

5. focus on current and potential environmental situations, while taking into account the historical perspective

6. promote the value and necessity of local, national and international cooperation in the prevention and solution of environmental problems

7. explicitly consider environmental aspects in plans for development and growth

8. enable learners to have a role in planning their learning experiences and provide an opportunity for making decisions and accepting their consequences

9. relate environmental sensitivity, knowledge, problem-solving skills and values clarification to every age, but with special emphasis on environmental sensitivity to the learner's own community in early years

10. help learners discover the symptoms and real causes of environmental problems

11. emphasize the complexity of environmental problems and thus the need to develop critical thinking and problem-solving skills

12. utilize diverse learning environments and a broad array of educational approaches to teaching/learning about and from the environment with due stress on practical activities and first-hand experience